



# ecology and environment, inc.

FAIRWAY WEST OFFICE BLDG., 4350 JOHNSON DRIVE, SHAWNEE MISSION, KANSAS 66205, TEL. 913-432-9961

International Specialists in the Environment



40032103  
SUPERFUND RECORDS

## MEMORANDUM

TO: Paul Doherty, ARPO  
FROM: Nancy Kepko, E&E/FIT  
DATE: August 15, 1986

Site:	<u>Syntex Verona</u>
ID #:	<u>N00007452154</u>
Break:	<u>3.3</u>
Other:	<u>E&amp;E</u>
	<u>8-15-86</u>

SUBJECT: Trip report for compliance monitoring of groundwater sampling at the Syntex plant in Verona, Missouri  
TDD # R07-8408-23D

## INTRODUCTION

The Ecology and Environment Field Investigation Team (E&E/FIT) was tasked under Technical Directive Document (TDD) R07-8408-23D to provide technical supervision during the implementation of the Syntex Verona Sampling Plan. The final phase of the sampling plan involved the collection of groundwater samples from ten monitoring wells installed by Terracon Consultants in August 1985 (see the Syntex Compliance Monitoring Trip Report dated January 24, 1986 TDD # R07-8408-23 for details on the well installation). Sampling of the wells was performed monthly for the first three months after installation and then quarterly for the remainder of the year. This report discusses the fourth quarterly sampling effort.

## PURGING OF THE WELLS

The monitoring wells were purged using the stainless steel Well Wizard pumps previously installed in each well. The initial water level was recorded at each well and three well volumes of water were then removed.

WELL #	DATE PURGED	INITIAL WATER LEVEL (from top of casing)	VOLUME REMOVED
1	7/14/86	13.75'	3.5 gallons
2	7/14/86	8.38'	6.0 gallons
3	7/14/86	11.00'	4.5 gallons
4	7/14/86	10.08'	5.0 gallons
5	7/14/86	10.92'	5.0 gallons
6	7/14/86	9.71'	5.5 gallons
7	7/14/86	9.88'	5.5 gallons
8	7/14/86	10.29'	5.0 gallons
9	7/14/86	11.00'	4.5 gallons
10	7/14/86	9.50'	5.5 gallons

(All of the monitoring wells are set at a total depth of 15 feet with the bottom 5 feet screened.)

#### SAMPLING OF THE MONITORING WELLS

The samples to be analyzed for TCDD contamination were collected by Steve Hennigh and Bill Durbin of Durbin Contracting. The samples were collected using the Well Wizard pumps installed in each well. Each TCDD sample consisted of two one-quart glass jars. One sample jar from each well was packaged and sent to the Syntex laboratory in Palo Alto, California for analysis. The other sample jar from each well was placed in the Empire building at the Syntex Verona, MO plant for storage.

The priority pollutant samples were collected on July 15, 1986 by Barry Haynie of the National Analytical Laboratory of Tulsa, Oklahoma, under contract to Syntex. Samples were collected from monitoring wells 1, 2, 3, 4, 6, 7, 8, and 10. The samples collected from monitoring wells 1 and 10 will be analyzed as discrete samples. The remaining samples were composited in the following manner:

composite 1: monitoring wells 2, 3, and 4  
composite 2: monitoring wells 6, 7, and 8

The National Analytical Laboratory will analyze the samples for the following (Priority Pollutant +):

pH	nitrate	volatiles
conductivity	phenols	TOX
chloride	TOC	metals
fluoride	coli	gross alpha, beta & gamma,
sulfate		radium

The samples were preserved in the following manner:

phenols	- copper sulfate and sulfuric acid and ice
metals	- nitric acid and ice
nitrate	- sulfuric acid and ice
TOC	- sulfuric acid and ice
all other samples	- ice

A summary of the samples collected by Syntex is listed below:

WELL #	SYNTEX SAMPLE NUMBER	DATE COLLECTED	ANALYSIS
1	01-07-14-86	7-14-86	TCDD
1	01-07-15-86	7-15-86	Priority Pollutant +
2	02-07-14-86	7-14-86	TCDD
2	02-07-15-86	7-15-86	Priority Pollutant + (to be composited with wells 3 and 4)

Syntex Plant, Verona, Missouri  
 Trip Report--Compliance Monitoring  
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WELL #	SYNTEX SAMPLE NUMBER	DATE COLLECTED	ANALYSIS
3	03-07-14-86	7-14-86	TCDD
3	03-07-15-86	7-15-86	Priority Pollutants + (to be composited with wells 2 and 4)
4	04-07-14-86	7-14-86	TCDD
4	04-07-15-86	7-15-86	Priority Pollutants + (to be composited with wells 2 and 3)
5	05-07-14-86	7-14-86	TCDD
6	06-07-14-86	7-14-86	TCDD
6	06-07-15-86	7-15-86	Priority Pollutants + (to be composited with wells 7 and 8)
7	07-07-14-86	7-14-86	TCDD
7	07-07-15-86	7-15-86	Priority Pollutants + (to be composited with wells 6 and 8)
8	08-07-14-86	7-14-86	TCDD
8	08-07-15-86	7-15-86	Priority Pollutants + (to be composited with wells 6 and 7)
9	09-07-14-86	7-14-86	TCDD
10	10-07-14-86	7-14-86	TCDD
10	10-07-15-86	7-15-86	Priority Pollutants +

Split samples were collected by Barry Haynie and Steve Hennigh from monitoring wells 1, 5, 6, 7, and 8 for the Region VII EPA. Each sample was collected in 3-80 ounce jugs and will be analyzed for TCDD and base/neutral, acid, and pesticide (B/N,A,P) fractions. A field blank was collected by removing the Well Wizard pump from monitoring well #1 and pumping deionized water through the decontaminated pump. A summary of the split samples collected for the EPA is listed below:

WELL #	EPA SAMPLE NUMBER	DATE COLLECTED	ANALYSIS
1	FK651001	7-15-86	TCDD, B/N,A,P
5	FK651002	7-15-86	TCDD, B/N,A,P
6	FK651003	7-15-86	TCDD, B/N,A,P

WELL #	EPA SAMPLE NUMBER	DATE COLLECTED	ANALYSIS
7	FK651004	7-15-86	TCDD, B/N,A,P
8	FK651005	7-15-86	TCDD, B/N,A,P
Field Blank	FK651006F	7-15-86	TCDD, B/N,A,P

#### SAMPLE SHIPMENT

The Syntex samples to be analyzed for TCDD were packaged and sent to the Syntex laboratory in Palo Alto, California. The samples to be analyzed for priority pollutants + were delivered to the National Analytical Laboratory in Tulsa, Oklahoma by Barry Haynie. The EPA split samples were packed in coolers and delivered to the Region VII EPA laboratory by Nancy Kepko E&E/FIT on Thursday July 17, 1986.

#### DECONTAMINATION

The samplers' gloves were decontaminated between samples using an isopropyl alcohol rinse. The exterior of the sample containers were decontaminated in the same manner. The Well Wizard pump used to collect the field blank was decontaminated using a water wash followed by a deionized water rinse.

#### LEVELS OF PROTECTION

The samplers were dressed in level-C protection. This level consisted of the following safety equipment:

- white coveralls
- cotton glove liners
- nitrile outer gloves
- neoprene steel toe and shank boots
- half-face air purifying respirator with high efficiency organic vapor filter

The E&E observer was dressed in level-D protection.

#### ADDITIONAL ACTIVITIES

Concurrent with the well sampling activities, a second Durbin crew was working on three old NEPACCO tanks located near the spill area. The tanks are identified as follows:

- tank 1316 24,000 gallon steel tank
- tank 1319 24,000 gallon steel tank
- tank N-100 20,000 gallon fiberglass tank

The sludge from the tanks was being removed and placed in steel 55-gallon drums. The drums are being stored in the old T-1 dike. The EPA had requested that a sample of the sludge be removed from each of the tanks. Difficulties were encountered in obtaining access from Syntex to collect the samples. The EPA decided to postpone the sample collection until the access difficulties could be worked out.

The following quantities of sludge were removed from the tanks:

- tank 1316	71 drums
- tank 1319	22 drums
- tank N-100	57 drums

#### RESOURCES EXPENDED

A total of 42 hours were required to supervise the collection of the 10 groundwater samples and attempt to collect the sludge samples from the tanks. This brings the total hours expended on the Syntex Compliance Monitoring TDD modification to 42 hours.

NK/ct

FIELD INVESTIGATIONS OF UNCONTROLLED  
HAZARDOUS WASTE SITES  
TASK REPORT TO THE E.P.A.

TITLE:

Monitoring Well Location Map

V.D.S. R-07-8408-23

geology and environment, inc.  
SHAWNEE MISSION, KANSAS

DATE: \_\_\_\_\_ DRAWN BY: \_\_\_\_\_ DATE: \_\_\_\_\_

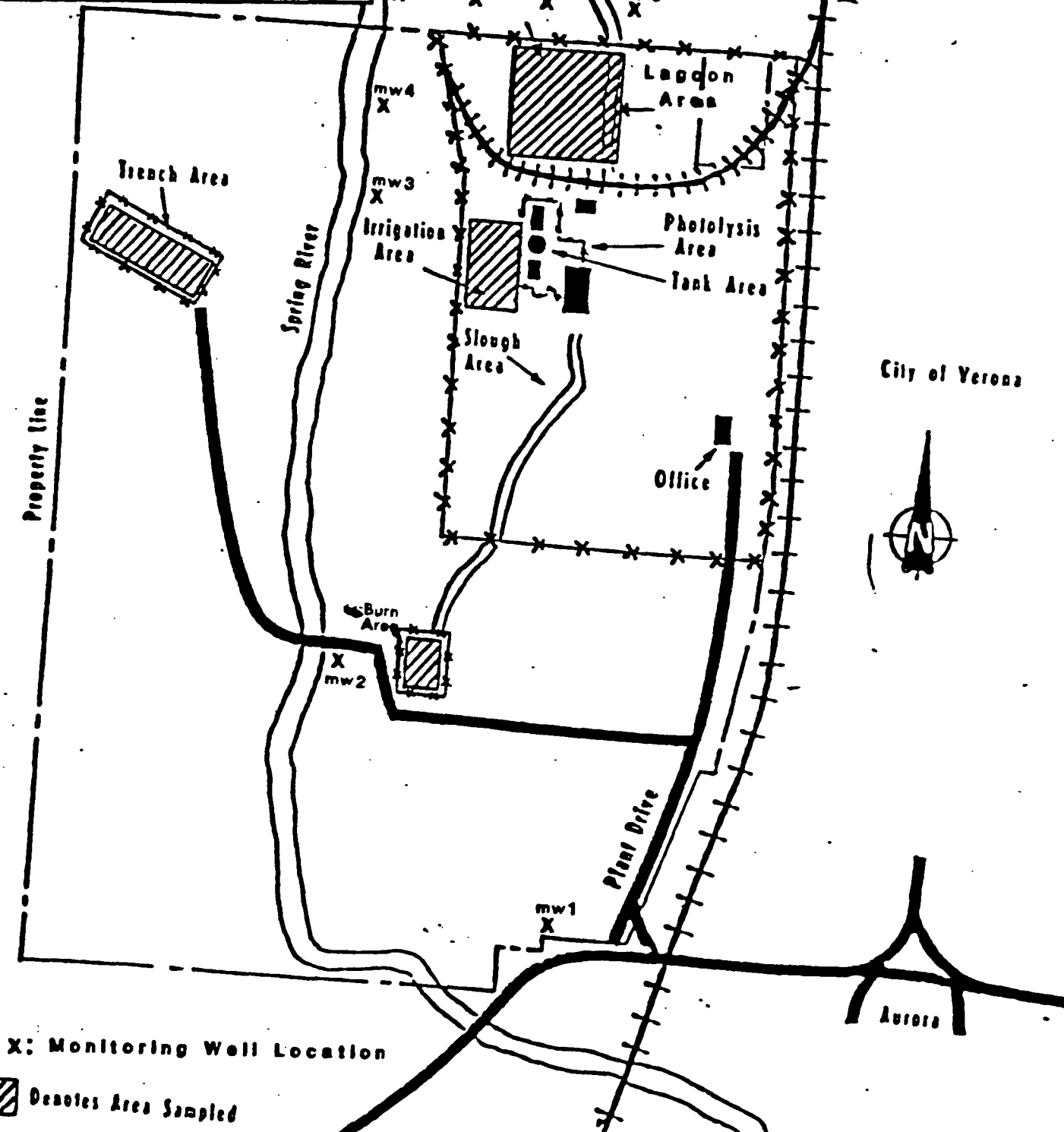
SYNTEX FACILITY, VERONA, MO

Burlington  
Rail Line

City of Verona



Aurora



X: Monitoring Well Location

▨ Denotes Area Sampled

[illegible]

FIELD SHEET  
U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION VII  
ENVIRONMENTAL SERVICES DIV. 25 FUNSTON RD. KANSAS CITY, KS 66115

: Site Name: SYNTEX FACILITY Site Number: 51 :  
: Location: VERONA. MO Site Code: SYN :

: Collected: YR: 86 MO: 7 Day: 15 Time: 1345 Leader: N. KEPKO :

: Sample Number: FK651001 SMO #: :

: Sample Media (circle one): :

: SOIL, DUST, RINSATE, SEDIMENT, WATER. OTHER: \_\_\_\_\_ :

: Sample Split (circle one): YES NO TK :

: Sample Container : Tag Color : Preservative : Analysis Requested :

: 80oz JUG : BLUE : ICE : TCDD :

: 80oz JUG : PURPLE : ICE : B/N A :

: 80oz JUG : PURPLE : ICE : PESTICIDES :

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: Depth: \_\_\_\_\_ Pan #: \_\_\_\_\_ Aliquots: \_\_\_\_\_ :

: Samplers: Steve Hennigh :

: Barry Haynie :

: \_\_\_\_\_ :

COMMENTS OF FIELD PERSONNEL

: Site Description: monitoring well # 1 :

: Bottle lot # A6118032 :



FIELD SHEET  
U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION VII  
ENVIRONMENTAL SERVICES DIV. 25 FUNSTON RD. KANSAS CITY, KS 66115

: Site Name: SYNTEX FACILITY Site Number: 51 :  
: Location: VERONA. MO Site Code: SYN :

: Collected: YR: 86 MO: 7 Day: 15 Time: 1805 Leader: N. KEPKO :

: Sample Number: FK651002 SMD #: :

: Sample Media (circle one): :

: SOIL, DUST, RINSATE, SEDIMENT, (WATER), OTHER: \_\_\_\_\_ :

: Sample Solit (circle one): (YES) NO :

: Sample Container : Tap Color : Preservative : Analysis Requested :

: 80oz JUG : BLUE : ICE : TCDD :

: 80oz JUG : PURPLE : ICE : B/N A :

: 80oz JUG : PURPLE : ICE : PESTICIDES :

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: Depth: \_\_\_\_\_ Pan #: \_\_\_\_\_ Aliquots: \_\_\_\_\_ :

: Samplers: Steve Hennigh :

: Barry Haynie :

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COMMENTS OF FIELD PERSONNEL

: Site Description: Monitoring Well # 5 :

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: Bottle lot # A6118032 :

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## FIELD SHEET

U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION VII

ENVIRONMENTAL SERVICES DIV. 25 FUNSTON RD. KANSAS CITY, KS 66115

Site Name: SYNTEX FACILITY

Site Number: 51

Location: VERONA, MO

Site Code: SYN

Collected: YR: 86 MO: 7 Day: 15 Time: 1550 Leader: N. KEPKO

Sample Number: FK651003

SMD #:

Sample Media (circle one):

SOIL, DUST, RINSATE, SEDIMENT, (WATER), OTHER: \_\_\_\_\_

Sample Split (circle one): YES NO

Sample Container : Tap Color : Preservative : Analysis Requested

8002 JUG

: BLUE

: ICE

: TCDD

8002 JUS

: PURPLE

ICE

: E/N A

8002 JUE

: PURPLE

: ICE

: PESTICIDES

Depth:

Par. #:

Aliquot:

**Samplers:**

Steve Hennigh

Barry Harnie

## COMMENTS OF FIELD PERSONNEL

Site Description: Monitoring Well # 6

Bottle lot # 15 338 292

1535 0012

A6099062

FIELD SHEET  
U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION VII  
ENVIRONMENTAL SERVICES DIV. 25 FUNSTON RD. KANSAS CITY, KS 66115

: Site Name: SYNTEX FACILITY Site Number: 51 :  
: Location: VERONA. MO Site Code: SYN :

: Collected: YR: 86 MO: 7 Day: 15 Time: 1615 Leader: N. KEPKO :

: Sample Number: FK651004 SMD #: :

: Sample Media (circle one):  
: SOIL, DUST, RINSATE, SEDIMENT, WATER, OTHER: \_\_\_\_\_ :

: Sample Split (circle one): YES NO :

: Sample Container : Tap Color : Preservative : Analysis Requested :

: 80oz JUG : BLUE : ICE : TCDD :  
: 80oz JUG : PURPLE : ICE : B/N A :  
: 80oz JUG : PURPLE : ICE : PESTICIDES :

: Depth: \_\_\_\_\_ Pan #: \_\_\_\_\_ Aliquots: \_\_\_\_\_ :

: Samplers: Steve Hennigh :

: Barry Haynie :

COMMENTS OF FIELD PERSONNEL

: Site Description: Monitoring well # 7 :

: Bottle lot # A6118032 :  
: A6099062 :

## FIELD SHEET

U. S. ENVIRONMENTAL PROTECTION AGENCY, REGION VII

ENVIRONMENTAL SERVICES DIV. 25 FUNSTON RD. KANSAS CITY, KS 66115

Site Name: SYNTEX FACILITY

Site Number: 51

Location: VERONA. MO

Site Code: SYN

Collected: YR: 86 MO: 7 Day: 15 Time: 1705 Leader: N. KEPKO

Sample Number: FK651005

SMD #:

Sample Media (circle one):

SOIL, DUST, RINSATE, SEDIMENT, (WATER) OTHER: \_\_\_\_\_

Sample Split (circle one): YES NO

Sample Container : Tag Color : Preservative : Analysis Requested

800z JUG

: BLUE

: ICE

: TCDD

800Z JUL

: PURPLE

ICE

: E/N A

BOCZ JUG

: PURPLE

: ICE

: PESTICIDES

Death: \_\_\_\_\_

Parl #: \_\_\_\_\_

Aliquots: \_\_\_\_\_

Samplers: Steve Hennigh

Barry Haynie

## COMMENTS OF FIELD PERSONNEL

Site Description: Monitoring Well # 8

Bottle lot # A6118032

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:   Site Name: SYNTEX FACILITY                               Site Number: 51      :  
:   Location: VERONA. MO                                     Site Code: SYN       :
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Collected: YR: 86 MO: 7 Day: 15 Time: 1830 Leader: N. KEPKO

Sample Number: FK651006F SMO #:

Sample Media (circle one):  
SOIL. DUST, RINSATE, SEDIMENT, WATER, OTHER: \_\_\_\_\_

Sample Split (circle one): YES NO

: Sample Container : Tap Color : Preservative : Analysis Requested :

[illegible]

: Depth:                      Pan #:                      Aliquots:                      :

Samplers: Steve Hennigh

Site Description: Field Blank collected by  
decontaminating the well wizard pump from monitoring  
well #1 and then pumping distilled DI water from  
a laboratory cleaned glass pickle jar.

Bottle lot # A648022  
A6099052